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Rules, Announcements and Directives Branch,
Office of Administration,
U. S. Nuclear Regulatory Commission,
Washington, DC 20555-0001

Subject: CORAR Comments to NRC on Draft Regulatory Guide DG-7007

Reference: Federal Register Vol.76, No 19, January 28, 2011, Pages 5215-5216. Draft Regulatory Guide, DG-7007, "Administrative Guide for Verifying Compliance with Packaging Requirements for Shipment and Receipt of Radioactive Material."

These comments are submitted on behalf of the Council on Radionuclides and Radiopharmaceuticals (CORAR)¹. CORAR manufacturer and distributor members have over 50 years of experience shipping and receiving licensed materials, worldwide, and appreciates the opportunity to comment on this important subject and would be glad to provide clarification or additional information.

Yours Sincerely,

Leonard R. Smith, CHP
Co-chair CORAR Committee on Manufacturing Quality and Safety.

1. CORAR members include the major manufacturers and distributors of radioactive chemicals, radioactive sources, radiopharmaceuticals and research radionuclides used in the U.S. for therapeutic and diagnostic medical applications and for industrial, environmental and biomedical research and quality control.

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Add = M. Orr (mp01)
m. Cree (mjc)
B. White (bhw)

CORAR COMMENTS TO NRC ON PROPOSED REVISION TO REG. GUIDE 7.7

DRAFT REG. GUIDE DG-7007 "ADMINISTRATIVE GUIDE FOR VERIFYING COMPLIANCE WITH PACKAGE REQUIREMENTS FOR SHIPMENT AND RECEIPT OF RADIOACTIVE MATERIAL"

Page 2, section C, paragraph 2, "In addition ... licensees should perform the necessary administrative requirements ... in a safe, secure and efficient manner."

Consider replacing "efficient" by "timely". It is not understood why efficiency would be a regulatory compliance concern.

Page 2, section C, paragraph 2, "Rather than following NRC regulations by section number ... this regulatory guide follows the sequence of steps involved in making a shipment ..."

CORAR appreciates this approach. It is much easier for licensees to follow and understand.

Page 3, paragraph 1, section C. 1.0, "Shipments ... may be ... regulated by multiple agencies (e.g., the NRC and DOT) ..."

Consider including the IAEA as another regulatory agency because a significant fraction of shipments of radioactive materials are to and from other countries.

Page 3, paragraph 2, section C. 1.0, "The contents dictate whether a Type A, Type AF, or Type B package is required."

Consider including "Excepted Packages" since a large number of radioactive material packages are Excepted.

Page 7, section C. 2.2 c, "Ensure that any system for containing liquid is adequately sealed and has adequate space or other specified provisions for expansion of the liquid;"

Licensees should also be advised that radionuclides in liquids, such as organic solvents, undergo radiolytic decomposition generating gases. There needs to be sufficient headspace to ensure the gas pressure is minimized and contained.

Page 8, section C. 4.0, "Receiving and Opening a Package"

Consider adding the recommendation that licensees should be aware of the package configuration prior to ordering radioactive materials to ensure they have the safe means for opening the package and accessing the contents.

Page 9, section C. 4.3, paragraph 2, "The comprehensive visual survey of the package should ensure that the package was properly assembled and did not sustain any significant damage during shipment."

It would be useful for receivers if they were provided guidance on how to differentiate between a damaged package leaking its radioactive contents and an intact package that has been contaminated by liquid from another non-radioactive package that was damaged in the transport system or that is wetted by rain or condensation (common for packages that contain dry ice or water ice coolants).

Page 10, paragraph 4, section C. 4.3, "The consignee should perform radiation surveys on the surface (by placing the detector as close as is physically possible to the external surface of the package) ... "

Consignees also need guidance on the detectors that are suitable for measuring surface radiation. Shippers commonly recommend using a side-window, energy compensated GM detector to measure radiation fields from gamma and beta emitting radionuclides because this has a suitably flat energy response for commonly shipped radionuclides and the detectors are small enough to not seriously underestimate the surface dose rate. .

Page 10, paragraph 2, section C. 4.3, "If the preliminary survey indicates more than 2 mSv/hr (200 mrem/hr) ..."

Consignees and carriers should be advised to take precautions to maintain exposure to ALARA when finding high radiation levels that may indicate a failure of the shielding. They may need to isolate the package, warn others in the vicinity and minimize their time and proximity to the package.

Page 10, paragraph 3, section C. 4.3, "... The wipe test is made by rubbing a filter paper ... "

Instead of "rubbing" consider "drawing". Rubbing implies a to-and-fro motion which would be inappropriate.

Page 11, section C. 5.2 a, "... (see Regulatory Position 2.0)."

We are not sure what is intended by "Regulatory Position 2.0". Clarify by adding "on page 3" if this is the intent.